

SARDAR RAJA COLLEGE OF ENGINEERING, ALANGULAM

RAJA NAGAR, ALANGULAM

DEPARTMENT OF COMPUTER APPLICATIONS



SUBJECT NAME : COMPUTER GRAPHICS

SUBJECT CODE : MC 9234

YEAR/DEGREE : II / MCA

SEM : III

Mrs. D.SHERLIN

Asst.Prof / MCA

OBJECTIVES

- ❖ To learn the concepts of 2D and 3D Transformations
- ❖ To study about Visual Communication
- ❖ To gain knowledge about the various presentation issues.
- ❖ To understand about Images and text

UNIT I BASIC CONCEPTS 9

2D Transformations – Clipping – Window – View Prot Mapping – Graphical User Interfaces and Interactive Input Methods – Picture Construction Techniques – Virtual Reality Environment.

UNIT II 3D GRAPHICS 9

3D Transformation – 3D Viewing – Visible Surface Detection – Back Face Detection – Depth Buffer Method – Scan Line Method.

UNIT III VISUAL COMMUNICATION 9

Creative Process – Digital Imaging Technology – Still Image – Digital Imaging – Using Images in Multimedia – Images on Web – Color Models.

UNIT IV PRESENTATION 9

for Presentation – Presentation function – Presentation Design Knowledge – Effective Human Computer Interaction.

UNIT V INTERACTIVE 3D ILLUSTRATED WITH IMAGES AND TEXT 9

Generating Illustrated Documents – Consistency of Rendered Images and their Textual Labels – Architecture – Zoom Techniques for Illustration Purpose – Interactive handling of Images and Text – Figure Captions for Anatomical Illustrations.

TOTAL = 45 Hours

REFERENCES:

1. Donald Hearn and M. Pauline Baker, “Computer Graphics in C Version”, Second Edition, Pearson Education.
2. Raf Steinmetz and Klara Nahrstedt, “Multimedia: Computing, Communication and applications”, Pearson Education.
3. John Villamil Casanova and Leony Fernandez-Elias, “ Multimedia Graphics”, Prentice Hall India.
4. Thomas Strothotte, “Computer Visualization-Graphics Abstraction and Interactivity”, Springer Verlag, Berlin Heiderberg, 1998.

Micro Lesson Plan

Hours	Lecture Topics	Text Book
UNIT I BASIC CONCEPTS		
1	2D Transformation	R1
2	2D Transformation (cont) & Clipping	
3	Clipping (cont)	
4	Window	
5	View port mapping	
6	Graphical User Interface & Interactive Input Methods	
7	Graphical User Interface & Interactive Input Methods	
8	Picture Construction Techniques	
9	Virtual Reality Environment	
UNIT II 3D GRAPHICS		
10	3D Transformation	R1
11	3D Transformation (cont)	
12	3D Viewing	
13	3D Viewing (cont)	
14	Visible Surface Detection	
15	Visible Surface Detection (cont)	
16	Back Face Detection	
17	Depth Buffer Method	
18	Scan line method	
UNIT III VISUAL COMMUNICATION		
19	Creative Process	R1
20	Digital Imaging Technology	
21	Still Image	
22	Digital Imaging	
23	Using images in multimedia	
24	Using images in multimedia (cont)	
25	Images on web	
26	Color models	
27	Color models (cont)	
UNIT IV PRESENTATION		
28	General Design Issues	R1
29	Architectural Issues	
30	Architectural Issues (cont)	
31	Information Characteristics for Presentation	
32	Presentation function	
33	Presentation design knowledge	
34	Effective Human Computer Interaction	
35	Effective Human Computer Interaction (cont)	
36	Information Characteristics for Presentation	

UNIT V INTERACTIVE 3D ILLUSTRATED WITH IMAGES AND TEXT		R1
37	Generating illustrated Documents	
38	Consistency of Rendered Images and their Textual Labels	
39	Architecture	
40	Architecture (cont)	
41	Zoom Techniques for illustration Purpose	
42	Zoom Techniques for illustration Purpose (cont)	
43	Interactive handling of images and Text	
44	Interactive handling of images and Text (cont)	
45	Figure Captions for Anatomical Illustrations	